

REMARKS

Claims 2 and 4 are active, and claim 5 was withdrawn from consideration.

Claim 2 is finally rejected under 35 USC 103a as being unpatentable over Wood (US Patent 5,733,399) in view of Straughan '758 and either one of Ganser '257 or Bliss '846 and is rejected under 35 USC 103a over Ndebi et al. (US Patent 6,217,964) in view of Bliss (US Patent 3,964,846) or Ganser. Claim 4 is rejected under 35 USC 103a as being unpatentable over Wood, '758 and either one of '257 and '846 in view of Fujiwara et al. (US Patent 5,630,770).

The references to Ganser, Straughan are new and form a new grounds of rejection. Applicants have filed a request for withdrawal of the finality of the final rejection as premature in a separate paper. The new grounds of rejection are not based on any amendment made to the claims and thus it is improper to make the instant Office Action final and is premature. See MPEP 706.07(a) which states a final rejection is improper if there is new grounds of rejection not necessitated by amendment. An applicant is entitled to fully respond to the new grounds of rejection as if a non-final action was involved.

The Substantive Rejections under 103(a)

Claim 2 is rejected over Wood in view of certain of the secondary references and over Ndebi in view of others of the secondary references.

Claim 2 calls for:

forming a solid rubber sheet;

laying said solid rubber sheet onto a seamless substrate film;
abutting both ends of said rubber sheet to form a cylindrical composite;

placing said cylindrical composite between an outer casing mold and a core mold where either said solid rubber sheet or said seamless substrate film faces radially inwardly; and

applying a pneumatic pressure to said cylindrical composite for vulcanizing said rubber sheet and for adhering said rubber sheet to said substrate film to form a one piece laminated cylinder.(underlining added)

The two step process of forming the composite cylinder formed of applying the rubber sheet to the film as underlined above in claim 2 is missing in Wood ('399) and in Ndebi as admitted in the Office Action. It should be understood that the composite as claimed comprises a lamination. It should be recalled that the Examiner required applicants to delete the composite descriptive term "laminated" from the original filed claims in the Office Action dated May 2, 2003 under 35 U:SC 112. Applicants complied with this request in the interest of advancing the prosecution of this application. The term "laminated" finds full support in the original filed application at paragraph [00021], Step (S3), page 5. Here the specification states that the rubber sheet and film are "laminated." This term is correct to describe the layer of rubber and film. There was nothing objectionable

about the term laminate. The undersigned is advised that the original Japanese priority document with respect to this clause as literally translated states "The cut rubber sheet and a seamless film are pressed together so as to be adhered physically to each other." This is what was meant by the term "laminate" in the as filed claims and specification. If the Examiner desires, applicants can amend the specification to define the lamination as the intended pressing together to form an adherent composite as explained. This pressing together to form the lamination means that the two sheets are attracted to each other by a physical phenomena such as static cling or other attractive mode of the two layers. Therefore, the term laminate in the original claims was clear and accurate and the objection thereto was not well founded.

The term "composite" as presently employed as required was intended by applicants to represent an alternative to the term "laminate" as used in the claims as required by the Examiner. No adhesive or other bonding medium is used to form this composite which is adhered layers. However, the layers are physically attracted to each other and held together by physical phenomena whereas the vulcanization provides a more permanent molecular or chemical bond.

Apparently the Examiner believed that the layers were not "laminated" due to a lack of bonding medium. However, as discussed above, that assumption was not correct. If the Examiner wishes, applicants can amend the claims to replace

or add to the term composite with the term laminate if desired as originally presented in the as filed claims if it will help advance the prosecution of this application.

Neither reference, or any other reference cited of record, discloses a first step of forming the composite, i.e., a laminate, of a rubber layer and a seamless film layer, outside the mold without additional structure and then, in a second step, inserting the composite inside the mold between an outer casing mold and a core mold for vulcanization as claimed. See applicant's above referred to paragraph [00021], specification page 5, lines 6-8, wherein the cut rubber sheet and seamless film are formed into a cylindrical shape outside the mold. Then the composite [the laminate without other structure] is placed inside the mold between the outer casing and core molds to be vulcanized in the mold, Page 5, lines 11-12. This two step process does not occur in Wood or Ndebi. Both references disclose that the layers are formed inside the mold as admitted in the Office Action.

The Office Action cites Ganser as suggesting this two step process. This is error. Ganser discloses that fully preformed belts made by undisclosed processes are inserted into the mandrel of the reference. The belt so inserted is a completely formed belt, are not the same as the composite as claimed and do not require vulcanization in the mold as in claim 2. The belt is inserted into the mold to be

further processed by a cutting step which forms the belt into further shapes and is not for vulcanization as claimed. Therefore, the vulcanization step is missing in Ganser, which does not suggest the two step process of forming multiple layers into a composite outside a mold for later placement between an outer casing mold and a core mold and vulcanized as claimed. Thus, there is no motivation for one of ordinary skill to do what is claimed based on this reference.

Bliss is also cited for disclosing the two step process. This is also error. In Bliss, the belt to be cured is first built up in a usual manner. Col. 3, lines 37-38. Bliss however does not state how the belt is built up or with what elements. Bliss does not state that the layers so formed form a composite as claimed, i.e., the elements, much less a rubber sheet and film as claimed, adhere physically to one another without additional elements. There is no basis in this reference to assume that no support structure is employed to build up the belt in the "usual manner." Further, the Bliss belt comprises different elements than the composite rubber layer and film as claimed.

The Bliss belt so built up, by means not disclosed, is placed over the mold inner assembly 12, which is first removed from the mold, Col. 3, lines 59-63. There is no teaching in this reference that a two layer composite comprising a rubber layer and a film layer would, could or should be so formed. Bliss builds up the belt with the usual various layers forming the complete belt comprising structure different the

claimed layers. This is different than what is claimed. The inner mold assembly receives the built up belt attached, not disclosed as a composite as claimed, and is then positioned in the mold. Lines 64-66.

In contrast, what is claimed is:

laying said solid rubber sheet onto a seamless substrate film;
abutting both ends of said rubber sheet to form a cylindrical
composite;

The cylindrical composite as explained above is intended by the specification to mean that the layers physically adhere to each other by some mechanism such as static cling without an additional bonding medium and then in a separate step:

placing said cylindrical composite between an outer casing
mold and a core mold where either said solid rubber sheet or
said seamless substrate film faces radially inwardly;
(underlining added)

and then vulcanizing the composite structure.

These latter steps are not performed or suggested by Bliss which does not go so far. Thus in the claimed two step process the rubber layer and film are formed into a composite first held together by physical phenomena without the use of supporting mold elements as in Bliss, and then in the second step the composite is placed between both the outer casing mold and the inner core mold. In Bliss, the layers are formed by a process not disclosed, are not disclosed as forming a

composite as claimed, and then transferred onto the inner mold. Then the combination of belt layers (not a composite) formed by that undisclosed process and inner mold are placed into the mold adjacent the outer mold. This is different than and does not suggest what is claimed. The layers of the claimed composite are adhered to one another outside the mold without other structure. There is no basis in Bliss that the formed belt prior to placement on the inner mold is a composite as claimed. The implication is that it is resting on another support structure and merely transferred from one support structure to another. The layers of such a belt are not disclosed as and do not form a composite as disclosed.

Bliss not only does not suggest what is claimed because Bliss requires a support structure for the layers, but teaches away from assembling a composite without the support structure, which structure requires more complexity and cost in the mold, the antithesis of obviousness. The remaining references cited of record are believed even more foreign to claim 2. This claim is believed allowable.

Claim 4 depends from claim 2 and is believed allowable for the same reasons.

For the reasons given, claims 2 and 4 are believed to be in condition for allowance, and such favorable action is hereby solicited.

No fee is believed due for this paper.